

Remarks

Reconsideration and withdrawal of the objections and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-24 remain pending in the application, with Claims 1, 7, 12, 13, 23 and 24 being independent. Claims 1, 12, 13, 15, 16, 20 and 22 have been amended herein. The claim changes have not been made for any reasons related to patentability.

Applicants have amended the title as requested by the Examiner. Favorable consideration and withdrawal of the objection to the title are requested.

Claims 16 and 22 were objected to for minor informalities. Without conceding the propriety of these objections, Applicants have amended these claims as requested by the Examiner. Favorable consideration and withdrawal of the objections to the claims are also requested.

Claims 1, 2, 4-8 and 10-24 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,838,342 (Takahashi et al.). Claims 3 and 9 were rejected under 35 U.S.C. § 103 as being unpatentable over Takahashi et al. in view of U.S. Patent Application Publication No. 2001/0003458 (Shioya). These rejections are respectfully traversed.

Takahashi et al. relates to an image forming apparatus that can correct density unevenness. A test image is formed and then read to obtain average density data. Based on the average density value, a common correction is performed for drive signals for the printing heads. More particularly, in the embodiment of Fig. 25, the degrees of

differences of the densities corresponding to individual orifices from the average density are calculated and, subsequently, a signal correction amount is calculated. Select signals for correction straight lines to be selected are obtained and unevenness correction signals are stored in a number equal to the number of orifices. Based on the unevenness correction data, different γ -correction curves are selected for the individual nozzles, thereby correcting the density unevenness. That is, in Takahashi et al., correction data is created with reference to near density unevenness produced when a pattern was printed.

Takahashi et al. differs from the present invention. The present invention can generate nozzle information representing an ejection characteristic of each nozzle and can then estimate an effect that the ink droplet ejected from each nozzle has on an image to be formed. The correction information is generated to correct an ink ejection condition of each nozzle according to the estimated result. In other words, the present invention can forecast, on the basis of information indicative of each nozzle characteristic and print data, how the image to be printed according to the print data is affected by each nozzle characteristic. Correction information can be created based on this forecast result.

Takahashi et al. fails to disclose or suggest at least generating nozzle information representing an ejection characteristic of each nozzle according to a landing state on a print medium of the ink droplet ejected from each nozzle, estimating, based on the generated nozzle information and the print data, an effect that the ink droplet ejected from each nozzle has on the image to be formed, and generating correction information to correct an ink ejection condition of each nozzle according to the estimation result, as is recited in independent Claims 1 and 7.

Furthermore, because Takahashi et al. merely reads density information from the test image, Takahashi et al. does not disclose or suggest performing a dot deviation correction based on deviation data representing an amount of deviation, or a difference, between an actual landing position of an ink dot formed on a print medium by the ink droplet ejected from each nozzle and an ideal landing position of the ink dot, as is recited in independent Claims 12, 13, 23 and 24.

Thus, Takahashi et al. fails to disclose or suggest important features of the present invention recited in the independent claims.

Shioya was cited by the Examiner for teaching determining whether a difference S is a small or large increase and appropriately performing an adjustment method or a complementing process. However, Shioya is not believed to remedy the deficiencies of Takahashi et al. noted above with respect to the independent claims.

Thus, independent Claims 1, 7, 12, 13, 23 and 24 are patentable over the citations of record. Reconsideration and withdrawal of the §§ 102 and 103 rejections are respectfully requested.

For the foregoing reasons, Applicants respectfully submit that the present invention is patentably defined by independent Claims 1, 7, 12, 13, 23 and 24. Dependent Claims 2-6, 8-11 and 14-22 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark A. Williamson", written over a horizontal line.

Mark A. Williamson
Attorney for Applicants
Registration No. 33,628

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
MAW:tnt

DC_MAIN 200993v1